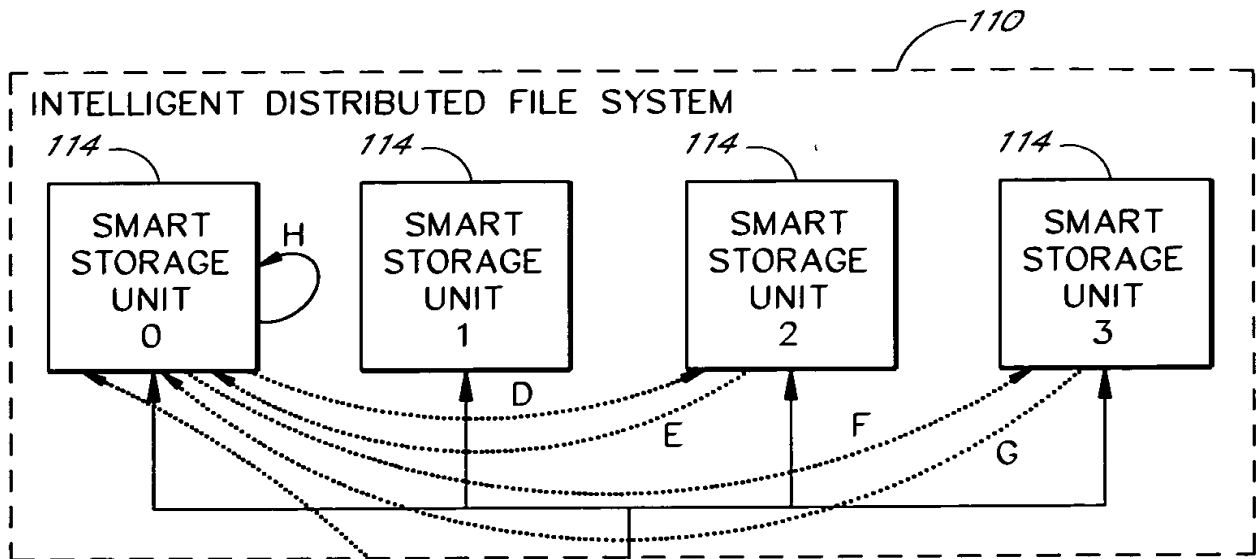


FIG. 1



- A. USER REQUESTS FILE
- B. SWITCH SEES REQUEST AND FORWARDS TO AVAILABLE SMART STORAGE UNIT 0
- C. SMART STORAGE UNIT 0 RECEIVES REQUEST
- D. SMART STORAGE UNIT 0 QUERIES SMART STORAGE UNIT 2 FOR DIRECTORY METADATA
- E. SMART STORAGE UNIT 0 RECEIVES DIRECTORY METADATA
- F. SMART STORAGE UNIT 0 QUERIES SMART STORAGE UNIT 3 FOR DIRECTORY METADATA
- G. SMART STORAGE UNIT 0 RECEIVES DIRECTORY METADATA
- H. SMART STORAGE UNIT 0 RETRIEVES FILE METADATA

FIG. 2

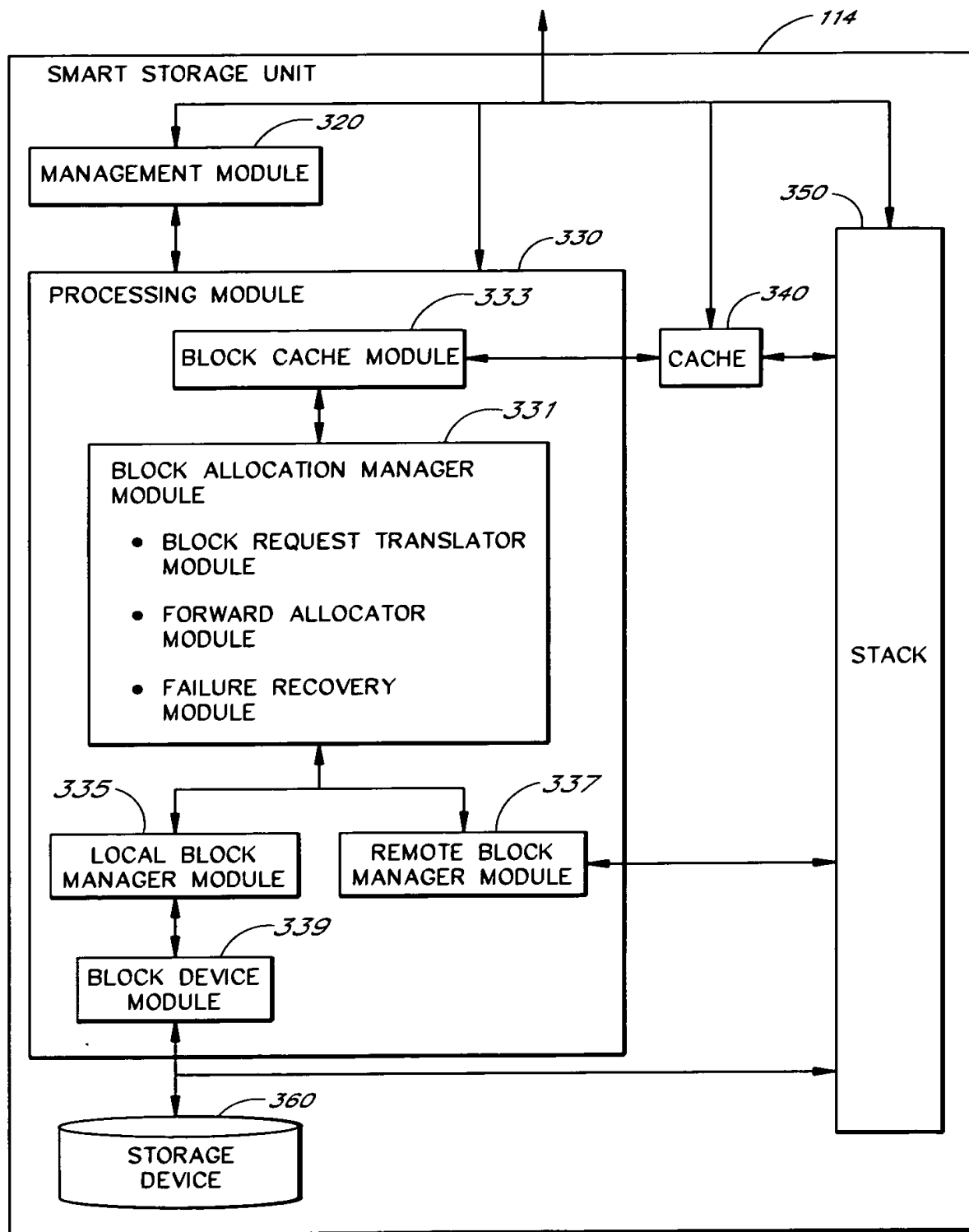


FIG. 3

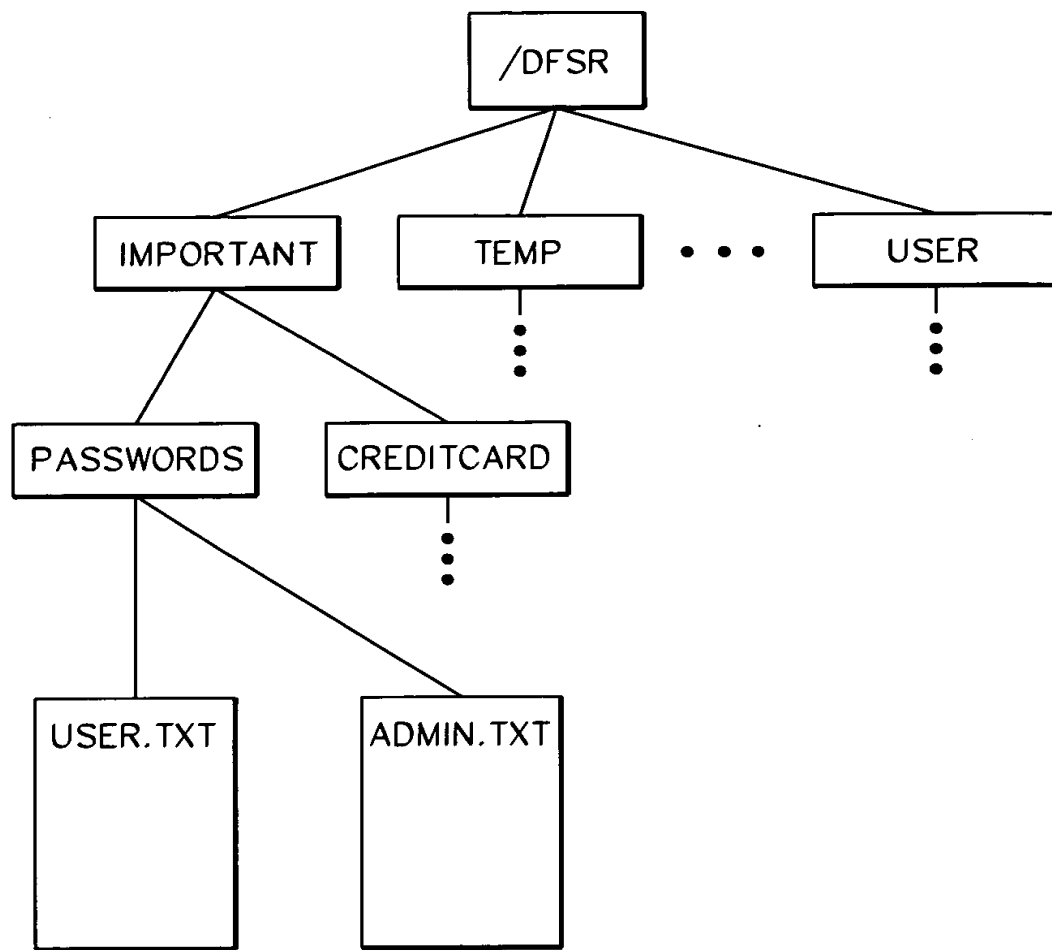


FIG. 4

510

DATA
LOCATION
TABLE

MODE		
OWNER		
TIMESTAMP		
SIZE		
PARITY COUNT		
MIRROR COUNT		
VERSION		
TYPE		
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
REFERENCE COUNT		
FLAGS		
PARITY MAP POINTER		

FIG. 5

TYPE 0		
	DEVICE	BLOCK
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		

D0
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
D14
D15
D16
D17
D18
D19
D20
D21
D22
D23

FIG. 6A

TYPE 1		
	DEVICE	BLOCK
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		

D0
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
D14
SI0
DI0
TI0
SI1
DI1
TI1
SI2
DI2
TI2

FIG. 6B

FIG. 6C

TYPE 2		
	DEVICE	BLOCK
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		

SI0
DI0
TI0
SI1
DI1
TI1
SI2
DI2
TI2
SI3
DI3
TI3
SI4
DI4
TI4
SI5
DI5
TI5
SI6
DI6
TI6
SI7
DI7
TI7

FIG. 6C

TYPE 3		
	DEVICE	BLOCK
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		

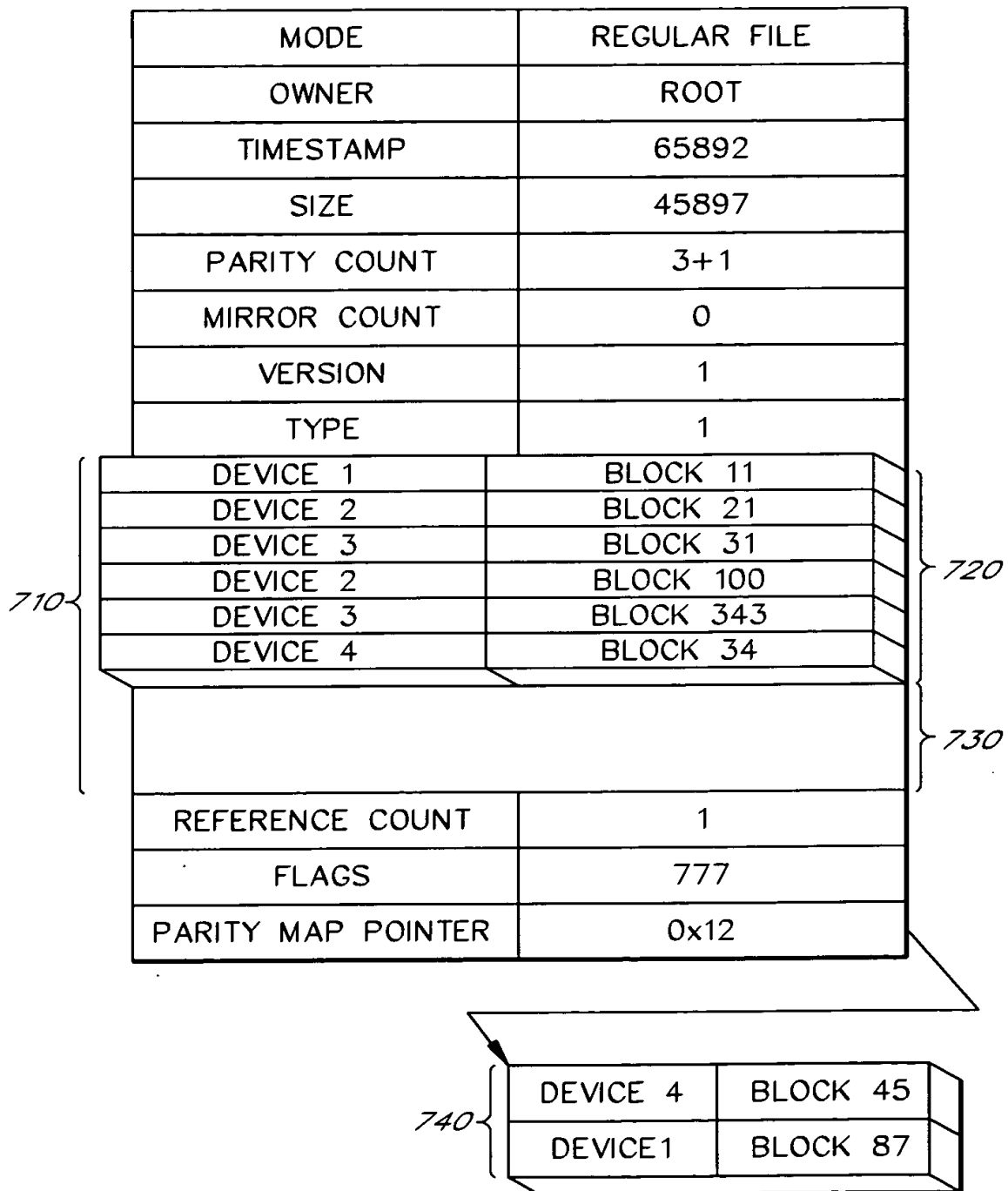
TI0
TI1
TI2
TI3
TI4
TI5
TI6
TI7
TI8
TI9
TI10
TI11
TI12
TI13
TI14
TI15
TI16
TI17
TI18
TI19
TI20
TI21
TI22
TI23

FIG. 6D

2025 RELEASE UNDER E.O. 14176

MODE		DIRECTORY		
OWNER		ROOT		
TIMESTAMP		65536		
SIZE		345		
PARITY COUNT		0		
MIRROR COUNT		3		
VERSION		1		
TYPE		1		
710	DEVICE 1		BLOCK 11	720
	DEVICE 2		BLOCK 21	
	DEVICE 3		BLOCK 31	
				730
REFERENCE COUNT		1		
FLAGS		777		
PARITY MAP POINTER		NULL		

FIG. 7A



740 {

FIG. 7B

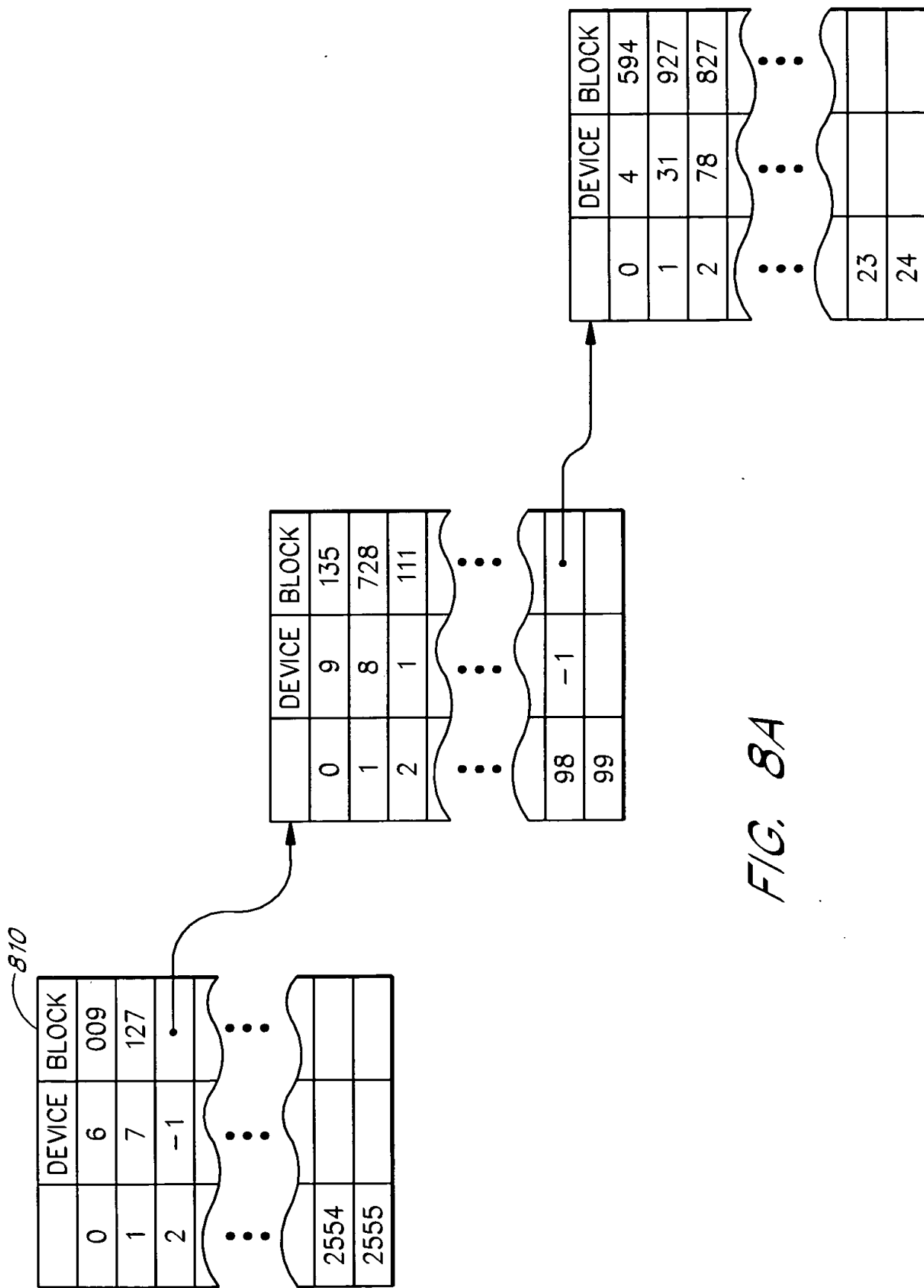


FIG. 8A

810

	DEVICE	BLOCK
0	1	375
1	2	223
2	3	532
3	4	791
4	5	101
5	1	376
6	2	224
7	3	533
8	4	792
9	5	102
10	1	377
11	2	225
...		
...		
...		

	DEVICE	BLOCK
0	6	897
1	7	003
2	8	321
3	9	452
4	10	721
5	6	651
6	7	981
7	8	133
8	9	727
9	10	563
10	6	229
11	7	583
...		
...		
...		

	DEVICE	BLOCK
0	11	001
1	12	001
2	13	001
3	14	001
4	15	001
5	11	011
6	12	011
7	13	011
8	14	011
9	15	011
10	11	021
11	12	021
...		
...		
...		

FIG. 8B

FIG. 8C

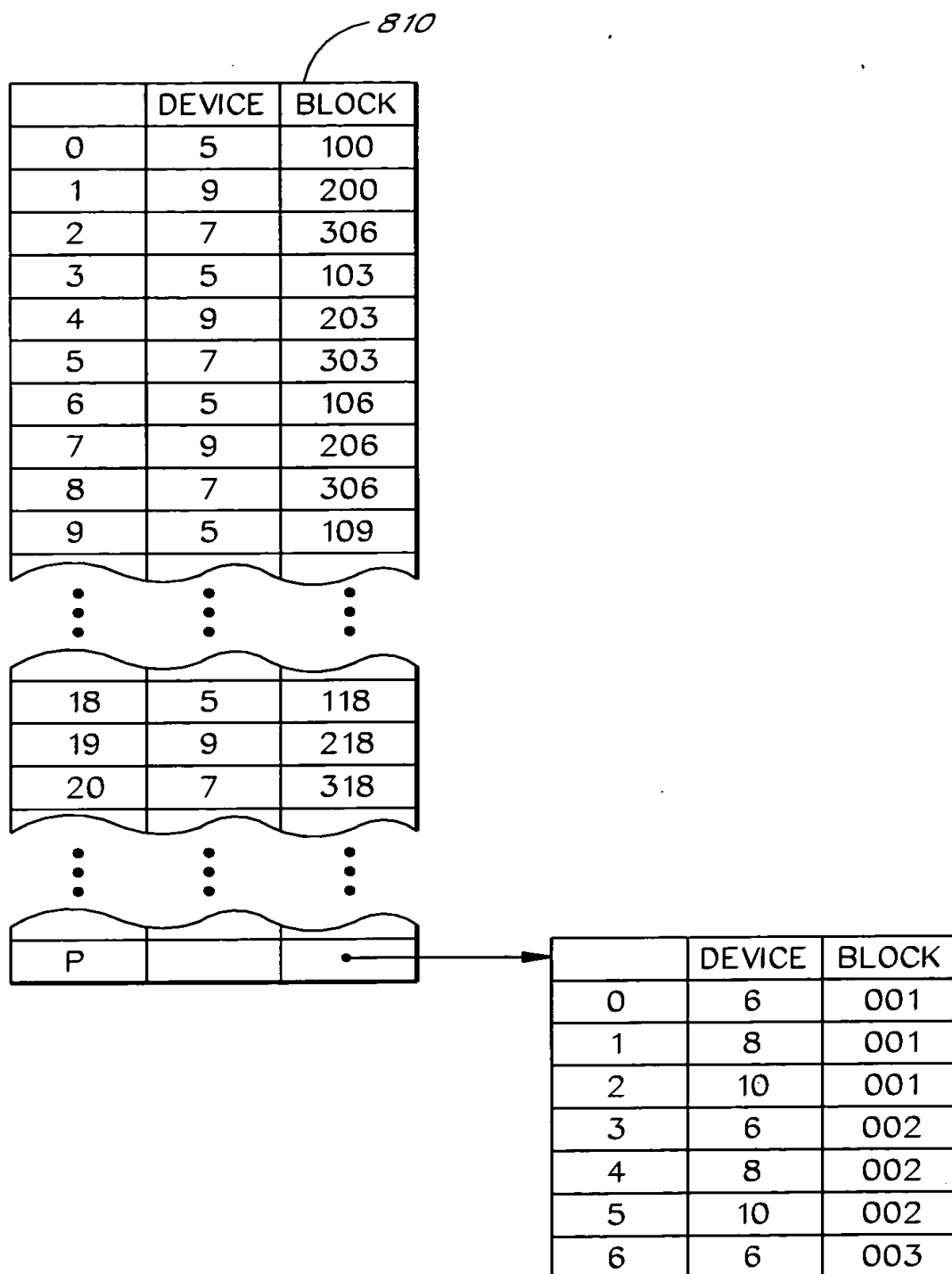
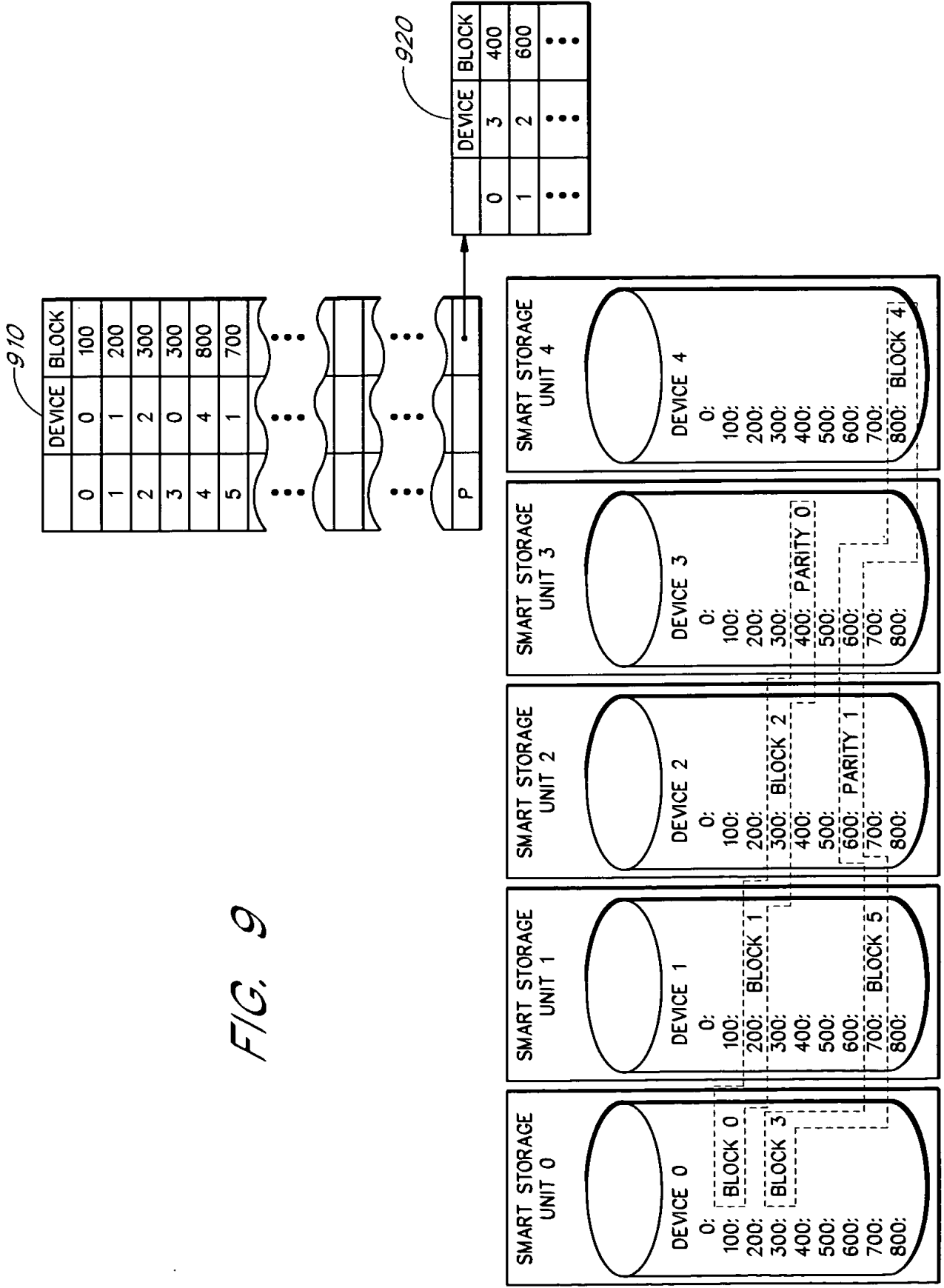


FIG. 8C

FIG. 9



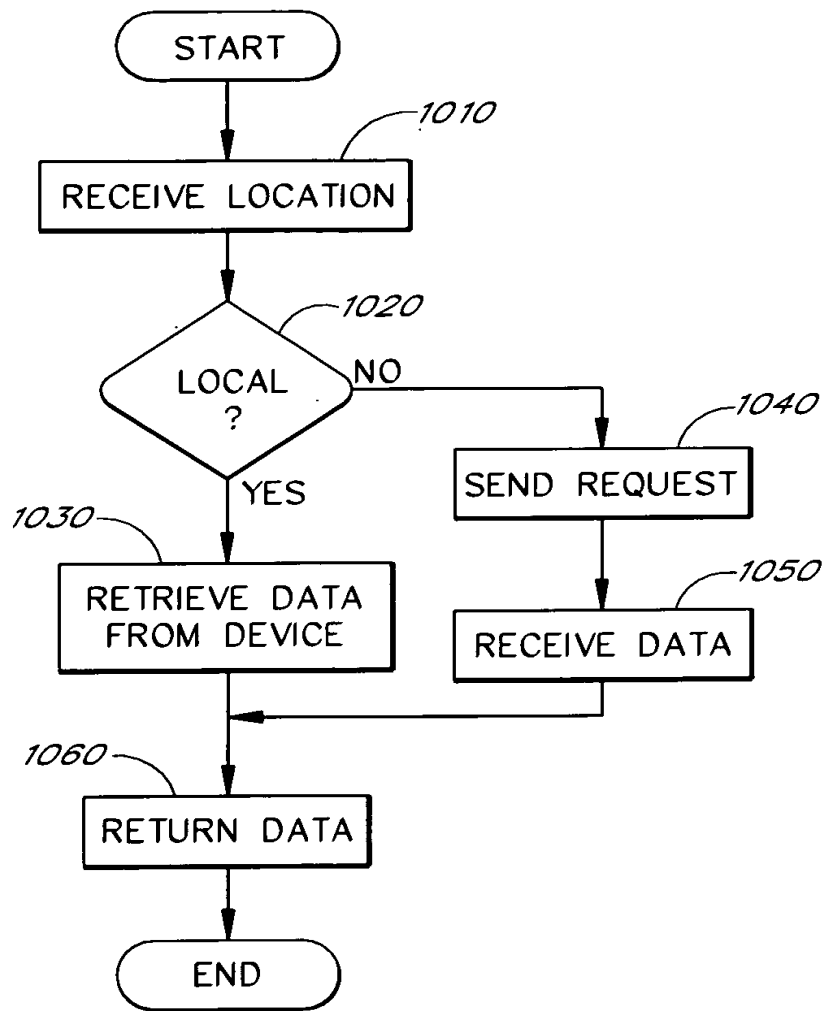


FIG. 10

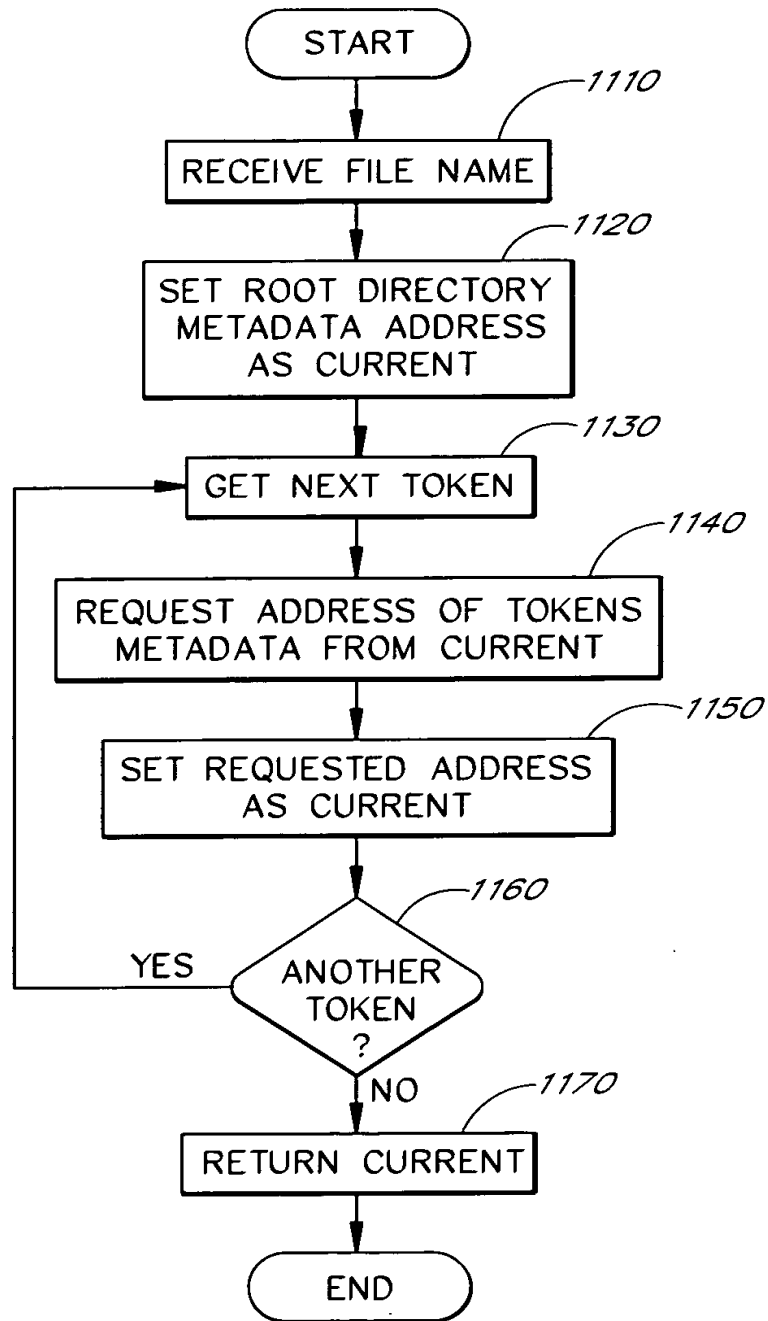


FIG. 11

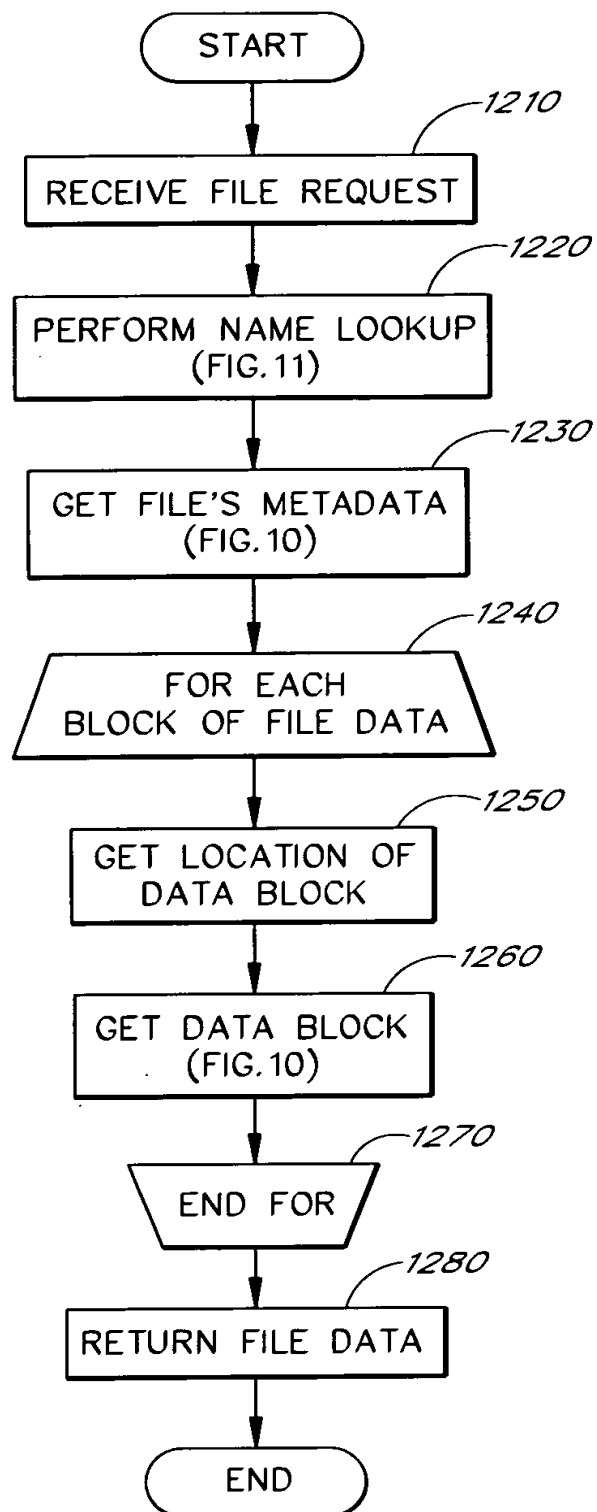


FIG. 12

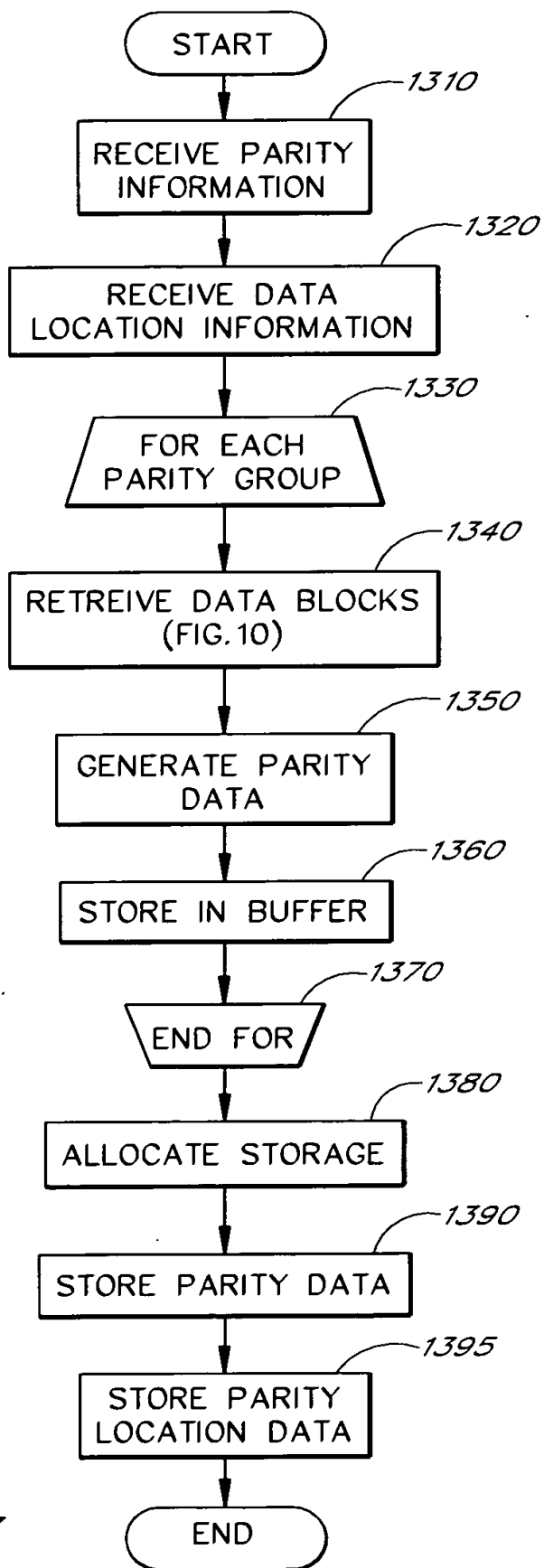


FIG. 13

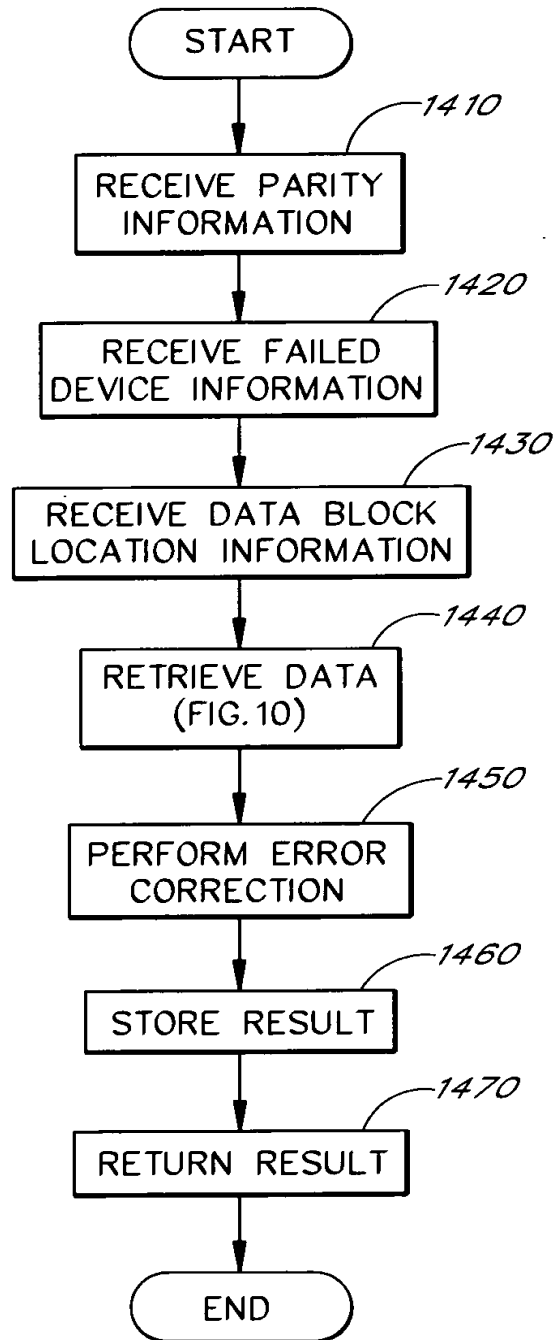


FIG. 14